Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

315. *By T. W. Wright, U. S. Lake Survey, Detroit, Mich.*—Two marksmen compete for a prize. Three shots are to be fired by each. The distance of each shot hole from the bull's eye is measured and he is the winner whose total distance is least. *A*'s three shots measured respectively 1, 2, 3 in. from the bull's eye. *B* then made three shots and the bull's eye fell off leaving no mark by which it could be replaced.

An examination showed that the coordinates of *B*'s shot holes, referred to an origin arbitrarily taken, were

(0, 0) inches, (1, 1) in. and (2, 3) inches.

Which of the marksmen was the probable winner?

316. *By W. E. Heal, Wheeling, Ind.*—Required the value of

$$\frac{\log x \sqrt{(1 - a^2x^2)}}{\sqrt{(1 - x^2)}}$$

where $x = 1$, and $a = \log(1 - x)$.

317. *By William Hoover, Wapakoneta, Ohio.*—If the scale of relation of a recurring series be $a_n - 7a_{n-1} + 12a_{n-2} = 0$, and if $u_0 = 2$, $u_1 = 7$, find u_n, and the sum of $u_0 + u_1 + \ldots + u_{n-1}$.

318. *By G. H. Harvill, Colfax, La.* — A man takes hold of the end of a cart tongue and travels off at right angles to the direction in which the tongue originally lay. Required the equation of the curve made by the middle of the axle.

319. *By Prof. Scheffer.*—Within a triangle to determine a point so that if the three pependiculars are let fall from it upon the sides of the triangle, the latter will be divided into three equal parts.

PUBLICATIONS RECEIVED.

On the Ghosts in Rutherford's Diffraction Spectra: A Quincuncial Projection of the Sphere: Note on the Theory of the Economy of Research: By C. S. PEIRCE. 4to. [Published by the authority of the Superintendent of the U. S. Coast and Geodetic Survey.]

Observations of the Satellites of Mars. [March, 1880.] By PROFESSOR A. HALL. [Reprinted from the Monthly Notices, R. A. S., Vol. XL, No. 5.]

On the Observations of Double Stars. By ASAPH HALL, of Washington, D. C. [From the Proceedings of the A. A. A. S., Vol. XXVIII, August, 1879.]

ERRATA.

On page 38, line 6 from bottom, for "*ABEF*" read, *ABED*.

" " 111, line 2 from bottom, for $(\triangle z)_0$ read, $(\triangle z)^0$.

In the diag. "(83)" p. 115, the figure 9 in the right hand section and lower row is reversed.